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	First Named Inventor	Stanley B. Miller III	
	Art Unit	1615	
	Examiner Name	Susan T. Tran	
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AF/1615

Tran

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

STANLEY B. MILLER III et al)	Art Unit 1615
)	
Serial No. 09/768,016	Examiner Susan T. Tran
)	
Filed January 23, 2001	
)	
ACID-GAS ABSORBING TABLET	
)	
AND METHOD OF USE	
)	

**APPELLANTS' REPLY BRIEF**

This is in reply to the Examiner's Answer of June 2, 2004.

On pages 3 and 4 of the Examiner's Answer, the Examiner set forth the rejection of claims 3-6 and 38-48 as being unpatentable over Tuma et al. This presentation was identical, line-for-line, to the rejection of these claims in the Office Action of December 11, 2003. Appellants answered this completely on pages 5-11 of Appellants' corrected Supplemental Brief dated March 22, 2004.

On pages 4 and 5 of the Examiner's Answer, the Examiner rejected claims 3-6 and 38-46 as unpatentable over Tuma and McLaughlin. This is identical, line-for-line, to the Examiner's rejection on page 3 of the Office Action of December 11, 2003. Appellants responded fully to this on pages 12-15 of Appellants' corrected Supplemental Brief dated March 22, 2004.

In the Examiner's Answer, the Examiner rejected 3-6 and 38-46 as being unpatentable over Tuma and Tanzer. This is identical, line-for-line, to the rejection presented by

the Examiner in the Office Action of December 11, 2003. Appellants treated this rejection fully on pages 15-19 of Appellants' corrected Supplemental Brief dated March 22, 2004.

On page 5 of the Examiner's Answer, the Examiner rejected claims 7, 10-12 and 28-37 over Tuma and Osborne. This is identical, line-for-line, to the rejection on pages 4 and 5 of the Office Action of December 11, 2003. A complete reply to this rejection is set forth on pages 19-23 of Appellants' corrected Supplemental Brief dated March 22, 2004.

On pages 6-8 of the Examiner's Answer, the Examiner set forth a response to Appellants' arguments. In the paragraph starting at the end of page 6, the Examiner states that "... it appears that appellant's specification does not define the terms 'first basic salt primary [sic] associated' and 'second basic salt primary [sic] associated'." The Examiner further stated

"Accordingly, Examiner is permitted to give any reasonable definition to these terms. A review of the specification at page 5, lines 6-10; page 6, lines 24-32; page 7, lines 1-2, indicate that a reasonable interpretation of the terms is that appellant intends to suggest mixing of the first and second basic salt with the adsorbent and binder respectively, altogether."

The last sentence is not understood. It appears that the Examiner is stating that the first and second basic salts and the adsorbent and binder are all mixed at the same time. If in fact this is the case, nothing is further from the truth, and therefore the Examiner's interpretation is not

reasonable. It is **unequivocally** stated in the specification in the last full paragraph of page 6:

"The carbon or silica gel or a blend thereof in any proportion and potassium carbonate were blended in a planetary blender for approximately 10 minutes." (page 6, lines 17-19).

Thereafter, in the same paragraph it is stated:

"After the foregoing, the potassium bicarbonate and polyvinylpyrrolidinone were blended in a simple vane mixer until homogeneous." (page 6, lines 28-30).

Thereafter, on page 6, lines 30 et seq., it is stated:

"Thereafter, the mixture of potassium bicarbonate and polyvinylpyrrolidinone were added to the mixture of carbon or silica gel or a blend thereof with the potassium carbonate and all these ingredients were blended in a sigma mixer at a temperature of about 54° C. for approximately two hours until the mixture was well blended and ready for tableting."

Therefore, there is absolutely no doubt that the specification states there were two initial separate mixings and a third mixing of the first and second mixings. It is submitted that the foregoing disclosure unequivocally supports the claimed subject matter which appears in claims 3-6, 7 and 10-12, namely, said first basic salt being primarily associated with said adsorbent, and said second basic salt being primarily associated with said binder.

The appealed claims 28-46 do not use the foregoing quoted phraseology "primarily associated" and therefore, it is respectfully submitted, are not subject to the Examiner's above-discussed reasoning.

Further in the foregoing respect, after the Examiner's statement that "... a reasonable interpretation of the terms is that appellant intends to suggest mixing of the

first and second basic salt with the adsorbent and binder respectively, altogether." The Examiner concludes with the statements:

"Tuma mixes the claimed ingredients with the suggestion that the ingredients are used for the same purpose, e.g., shaped adsorbent articles used in electronic devices for absorbing acid gas, filtering fluid and air (see abstract, columns 1 and 9). Thus, it would have been obvious to use more than one basic salts for the same purpose, shaped adsorbent articles used in electronic devices for absorbing acid gas, filtering fluid and air, as done by appellant."

The foregoing is not understood. It appears that the Examiner may be stating that Tuma mixes all the claimed ingredients together. Also, it is not understood how the sentence "Thus, it would have been obvious to use more than one basic salts for the same purpose ..." is relevant to the present fact situation because Appellants' more than one basic salt is not used for the same purpose. In this respect, the specification clearly indicates that the first basic salt which is mixed with the adsorbent is for absorbing acid gases directly and the second basic salt which is mixed with the binder is for the purpose of absorbing acid gases directly and also absorbing acid gases which were adsorbed and desorbed from the binder. This is clearly set forth in Appellants' corrected Supplemental Brief starting on page 3, line 8.

Starting at the first full paragraph on page 7 of the Examiner's Answer, the Examiner states:

"Applicant argues that it would not have been obvious for one of ordinary skill in the art to modify Tuma's adsorbent article to produce the composition wherein a first basic salt being primarily associated with the adsorbent, and said second basic salt being

primarily associated with the binder. In response to applicant's argument, it is the product per se is being claimed, and the burden is shifted to appellant to establish that the mixing steps to produce an article taught by Tuma, imparts a patentably distinct article. The prior art articles are clearly shaped adsorbent articles useful for the same purpose, e.g., absorbing acid gas, filtering fluid and air. There are no ratios and/or percentages set forth that impart a distinction over the process disclosed by the prior art. Note that **claim 34** clearly acknowledges that any proportions may be used. Furthermore, no unexpected result is seen in the use of multiple basics salts over the prior art teachings." (Emphasis added)

In the above quoted paragraph the Examiner stated "In response to applicant's argument, it is the product per se is being claimed, and the burden is shifted to appellant to establish that the mixing steps to produce an article taught by Tuma, imparts a patentably distinct article." It is not seen how any burden is shifted to Appellant "to establish that the mixing steps to produce an article taught by Tuma, imparts a patentably distinct article." The product being claimed by Appellants is a new product which is **not taught by Tuma**. Accordingly, it is Appellants' understanding that the burden is on the Examiner to show that Appellants' claimed subject matter is obvious under 35 USC 103. In the foregoing respect, claims 3-6 are article claims inasmuch as they are directed to "An acid-gas absorbing tablet." Claims 7 and 10-12 are method claims which recite the steps of providing the acid-gas absorbing tablet which includes the various ingredients and installing it in an electronic device. Here again, the product which is being claimed as a part of the method is **not taught** by the Tuma patent.

In the above-quoted paragraph the Examiner concludes with the statement "Note that claim 34 clearly acknowledges that any proportions may be used. Furthermore, no unexpected result is seen in the use of multiple basics [sic] salts over the prior art teachings." The paragraph in which the foregoing quoted conclusion appears apparently referred only to the Tuma patent, as did the paragraph beginning at the end of page 6 of the Examiner's Answer. Yet, claim 34, which was specifically referred to, relates to the rejection on Tuma and Osborne. In any event, it is submitted that all of the Examiner's rejections as they appeared in the Office Action of December 11, 2003 were thoroughly answered in Appellants' corrected Supplemental Brief dated March 22, 2004.

The Examiner stated "Furthermore, no unexpected result is seen in the use of multiple basics [sic] salts over the prior art teachings." However, it is submitted that the unexpected results are clearly there, considering that none of the prior art patents either Tuma taken individually or Tuma in combination with other patents show that the the first basic salt with the adsorbent absorbs acid-gases directly and that the second basic salt with the binder absorbs acid-gases directly and also absorbs the acid-gases which were adsorbed and desorbed by the binder, and the reason that the preferred second basic salt is mixed with the binder is because it mixes more directly therewith than the basic salt which is mixed with the adsorbent.

On page 8 of the Examiner's Answer, the Examiner stated as follows:

"While the generic claims claimed the particular limitation, dependent claims 4, 5, 10, 11, 29, 32, 35, 41, 42, 44 and 45 recited first and second basic salts can be selected from the same salt groups, such as, sodium and potassium carbonates or bicarbonates. Although there are dependent claims that recited first acid salt is selected from the carbonates salt group, and second acid salt is selected from the bicarbonates salt group, applicant's specification at **page 5** disclosed potassium carbonate or any other suitable basic salt (first basic salt) may be used with the binder. Accordingly, no criticality is seen in the limitation of first basic salt is associated with the adsorbent, and second basic salt is associated with the binder." (Emphasis added)

In the above quoted paragraph, the Examiner indicated that claims 4, 5, 10, 11, 29, 32, 35, 41, 42, 44 and 45 recited that the first and second basic salts can be selected from the same salt groups. The Examiner also stated that there are dependent claims that the first acid salt is selected from the carbonates salt group and the second acid salt is selected from the bicarbonates salt group. The Examiner correctly stated that "... applicant's specification at page 5 disclosed potassium carbonate or any other suitable basic salt (first basic salt) may be used with the binder." The Examiner then concluded "Accordingly, no criticality is seen in the limitation of first basic salt is associated with the adsorbent, and second basic salt is associated with the binder." The entire paragraph in which the portion of applicant's specification referred to on page 5 reads as follows:

"Another basic salt which is preferably present is potassium bicarbonate, and it may be present in an amount of between about .5% and 7%, and more preferably



between about 1.5% and 4%, and most preferably between about 2.5% and 3%. Other basic salts having a Ph of between 7 and 12 may be substituted for the potassium bicarbonate, and such compounds include, without limitation, potassium carbonate, sodium bicarbonate and sodium carbonate. The function of the potassium bicarbonate is to preferentially absorb acid gases directly and thereafter also absorb the acid gases which have been adsorbed by the binder and thereafter desorbed therefrom. The reason that potassium bicarbonate is used in addition to the potassium carbonate is because it mixes more readily with the binder. Potassium carbonate is preferentially used with the adsorbent due to its greater capacity to absorb the acid gases, thus maximizing the total acid-gas absorption capacity. However, as noted above, potassium carbonate or any other suitable basic salt, including but not limited to salts in the hydroxide and amine families, may be used with the binder, **but a bicarbonate is preferred.** As summarized hereafter, the polyvinylpyrrolidinone adsorbs and releases the acid gases, and the bicarbonate thereafter chemically combines therewith and releases carbon dioxide and water. The water is adsorbed by the adsorbent, and the carbon dioxide is vented to the atmosphere." (Emphasis added)

In the foregoing paragraph it is specifically stated that "The reason that potassium bicarbonate is used in addition to the potassium carbonate is because it mixes more readily with the binder." The paragraph further states "However, as noted above, potassium carbonate or any other suitable basic salt, including but not limited to salts in the hydroxide and amine families, may be used with the binder, but a bicarbonate is preferred." In the context of the claims which refer to a first basic salt which is primarily associated with the sorbent and a second basic salt which is primarily associated with the binder, the first and second basic salts may be identical, but they are considered a first basic salt primarily associated with the adsorbent and a second basic salt primarily associated with the binder in the sense that they are mixed separately with the adsorbent and the binder.

Thus, as stated in the above-quoted portion of the specification, the bicarbonate is preferred with the binder but that any suitable basic salt may be used with the binder. Since the primary consideration relative to the first and second salts is that they are mixed individually with the adsorbent and the binder, the claims do not preclude the first and second salts as being the same salt.

#### CONCLUSION

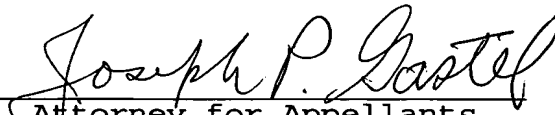
In view of the foregoing remarks it is submitted that the Examiner's rejection of claims 3-7, 10-12 and 28-46 be reversed.

Three copies of this Reply Brief are being submitted.

Respectfully submitted,

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